In The United States Patent and Trademark Office
On Appeal From The Examiner To The Board
of Patent Appeals and Interferences

In re Application of: Mukesh Dalal

Serial No.:   09/415,507

Filing Date: October 8, 1999

Group Art Unit: 3623

Examiner: Rebecca M. Bachner

Title: METHOD AND SYSTEM FOR OPTIMIZING
REQUEST-PROMISE WORKFLOWS

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GROUP 3600

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Commissioner of Patents

P.O. Box 1450

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Dear Sir:

Appeal Brief

Appellant has appealed to the Board of Patent Appeals and Interferences from the decision of the Examiner mailed June 27, 2002, finally rejecting Claims 1-47. Appellant filed a Notice of Appeal on September 25, 2002. Appellant respectfully submits this Appeal Brief, in triplicate, with the statutory fee of $320.00.

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Real Party In Interest

This application is currently owned by i2 Technologies US, Inc., as indicated by:

an assignment recorded on February 14, 2000, in the Assignment Records of the United States Patent and Trademark Office at Reel 010615, Frame 0899; and

an assignment recorded on July 30, 2001, in the Assignment Records of the United States Patent and Trademark Office at Reel 012037, Frame 0412.

Related Appeals and Interferences

There are no known appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision regarding this appeal.

Status of Claims

Claims 1-47 are pending in this application. Claims 1-47 stand rejected pursuant to a final Office Action mailed June 27, 2002, and are all presented for appeal. All pending claims are shown in Appendix A.

Status of Amendments

All amendments submitted by Appellant were entered by the Examiner before the issuance of the final Office Action mailed June 27, 2002.

Summary of Invention

In particular embodiments of the present invention, a system for optimizing a request-promise workflow may establish a demand at a second entity for one or more supplies supplied by a first entity. (Specification, Page 9, Lines 16-18) The first entity may be operable to produce the supplies, and may optimize its production of the supplies using a request for the supplies as a constraint to generate a promise for the supplies. (Specification, Page 9, Lines 13-16) The system may optimize its production of the demand to generate a request for the supplies, and may communicate the request to the first entity. (Specification, Page 9, Lines 18-28) The system may also receive a promise for the supplies from the first entity based on the request. (Specification, Page 9, Lines 25-28) The promise may be generated according to an optimization of production of the supplies using the request as a constraint, and may identify a culprit as a cause for the

promise not satisfying the request if the promise does not satisfy the request. (Specification, Page 9, Lines 13-16, Page 17, Lines 21-23) The system may generate a constraint according to the culprit, and may reoptimize its production of the demand using the constraint generated according to the culprit to generate a new request if the promise does not satisfy the request. (Specification, Page 17, Lines 28-31)

Statement of Issue

Are Claims 1-47 allowable over U.S. Patent No. 6,055,519 to Kennedy et al. ("*Kennedy*") in view of *Systems Engineering and Analysis* by Blanchard et al. ("*Blanchard*") under 35 U.S.C. § 103(a)?

Grouping of Claims

Pursuant to 37 C.F.R. § 1.192(c)(7), Appellant requests that the following claims be grouped together for purposes of this appeal:

1. Group 1: Claims 1-4, 7-12, 15-21, 44, and 46-47.

Claims 1-4, 7-12, 15-21, 44, and 46-47 may be deemed to stand or fall together for purposes of this appeal. Claims 2-4 and 7-10 depend from independent Claim 1, and Claims 12 and 15-21 depend from independent Claim 11.

2. Group 2: Claims 22-23, 25-34, 36-43, and 45.

Claims 22-23, 25-34, 36-43, and 45 may be deemed to stand or fall together for purposes of this appeal. Claims 23 and 25-32 depend from independent Claim 22, and Claims 34 and 36-43 depend from independent Claim 33.

3. Group 3: Claims 5-6, 13-14, 24, and 35.

Claims 5-6, 13-14, 24, and 35 may be deemed to stand or fall together for purposes of this appeal. Claims 5 and 6 depend from independent Claim 1, Claims 13 and 14 depend from independent Claim 11, Claim 24 depends from independent Claim 22, and Claim 35 depends from independent Claim 33.

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Appellant submits that the explanations provided in the Argument section do not merely point out differences between the claims but present arguments as to the separate patentability of each claim as required by 37 C.F.R. § 1.192(c)(7) and M.P.E.P. § 1206.

Argument

The rejection of Claims 1-47 under 35 U.S.C. § 103(a) as being unpatentable over *Kennedy* in view of *Blanchard* is improper and should be withdrawn. Accordingly, Appellant respectfully requests the Board to reverse the final rejection of Claims 1-47 and to direct the Examiner to issue a Notice of Allowance with respect to Claims 1-47.

Claims 1-47 are allowable under 35 U.S.C. § 103(a)

In the final Office Action mailed June 27, 2002, the Examiner rejected Claims 1-47 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,055,519 to Kennedy et al. (*Kennedy*) in view of *Systems Engineering and Analysis*, Third Edition, by Blanchard et al. (*Blanchard*). Appellant respectfully submits that the combination of *Kennedy* and *Blanchard* proposed by the Examiner fails to disclose, teach, or suggest the combination of limitations specifically recited in Appellant's claims.

Independent Claims

At a minimum, the proposed *Kennedy-Blanchard* combination does not disclose, teach, or suggest the following:

1.   As recited in Appellant's independent Claims 1, 11, 44, and 46:

a.   receiving a "promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;"

b.   generating "a constraint according to the culprit;" and

c.   reoptimizing "production of the demand using the constraint generated according to the culprit."

2.   As recited in Appellant's independent Claim 47:

a.   receiving a promise comprising "a first promise for the first supply and a second promise for the second supply, the promise identifying a culprit comprising the second supply as a cause for the promise not satisfying the request if the promise does not satisfy the request, the promise comprising an optimization objective and a promise constraint;" and

b.   "if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand in accordance with the constraint, the promise constraint, and the optimization objective."

3.   As recited in Appellant's independent Claims 22, 33, and 45:

a.   receiving "a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;"

b.   receiving "a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;" and

c.   "if the first promise does not satisfy the first request or the second promise does not satisfy the second request," generating "a constraint according to the first culprit or the second culprit, respectively," and reoptimizing "the production of the demand in accordance with the constraint to generate a new first request and a new second request."

In the final Office Action, the Examiner admitted that *Kennedy* does not disclose, teach, or suggest the limitations of Claims 1, 11, 22, 33, and 44-47. Regarding Claim 1, the Examiner conceded:

> Kennedy et al. do not explicitly teach that the promise was generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request and generating a constraint according to the culprit.

(Office Action, Pages 3-4; see also Office Action, Pages 10-12, 17-19, 25-27, and 34-42) In the Advisory Action mailed September 12, 2002, the Examiner argued:

> On pages 231-236, Blanchard et al. teach the identification of the most limiting constraint, or culprit. The idea of limited or constrained resources is old and well

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known in the art. The culprit is merely the resource that limits the other resources. Identifying the culprit is also old and well known in the art. One managing a workflow system would want to know and identify the limiting or constrained resource.

(Advisory Action, Page 2)

Appellant respectfully submits that *Blanchard* does not disclose, teach, or suggest a culprit as a cause for a promise not satisfying a request as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47. *Blanchard* merely discloses optimization using constraints that have already been identified. For example, *Blanchard* discloses, "Suppose that there exists a constraint on the pier spacing, expressed as a minimum spacing of 110 feet to permit safe passage of barge traffic." (*Blanchard*, Page 232) Constraints, however, are not identical to culprits as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47. According to *Blanchard*, "In design and operations alike, physical and economic limitations often exist which act to limit system optimization globally. These limitations arise for a variety of reasons and generally cannot be removed by the decision maker. Accordingly, there may be no choice except to find the best or optimum solution subject to the constraints." (*Blanchard*, Page 231) That is, a constraint describes a limitation, but does not necessarily describe a cause of a limitation, and thus certainly does not describe a cause for a promise not satisfying a request as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47. Accordingly, *Blanchard* does not disclose, teach, or suggest a culprit as a cause for a promise not satisfying a request as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47.

Moreover, *Blanchard* does not disclose, teach, or suggest receiving a promise identifying a culprit or generating a constraint according to a culprit as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47. As discussed above, *Blanchard* does not disclose, teach, or suggest a culprit as a cause for a promise not satisfying a request. Accordingly, *Blanchard* cannot disclose, teach, or suggest receiving a promise identifying a culprit or generating a constraint according to a culprit as recited in Appellant's independent Claims 1, 11, 22, 33, and 44-47.

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Furthermore, neither *Kennedy* nor *Blanchard* disclose, teach, or suggest any procedure for identifying a culprit. The Examiner claims, "Although Kennedy et al. do not explicitly state that they identify the culprit, Kennedy et al. must internally identify a culprit in order to reject the request." (Office Action, page 43) Appellant respectfully submits that this is not the case. In some situations, the culprit cannot be internally identified. For example, if a request requests two supplies and a promise fails to satisfy both supplies, the supply that is the culprit cannot be internally identified without additional information. In any event, even assuming for the sake of argument that *Kennedy* did disclose internally identifying a culprit, *Kennedy* even in combination with *Blanchard* would still fail to disclose, teach, or suggest limitations 1a-c, 2a-b, and 3a-c discussed above.

Therefore, at a minimum, the proposed *Kennedy-Blanchard* combination fails to disclose, teach, or suggest:

receiving a "promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request" (recited in Appellant's independent Claims 1, 11, 44, and 46);

receiving a promise comprising "a first promise for the first supply and a second promise for the second supply, the promise identifying a culprit comprising the second supply as a cause for the promise not satisfying the request if the promise does not satisfy the request, the promise comprising an optimization objective and a promise constraint" (recited in Appellant's independent Claim 47); or

receiving "a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request" and receiving "a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request" (recited in Appellant's independent Claims 22, 33, and 45).

As another example, the proposed *Kennedy-Blanchard* combination does not disclose, teach, or suggest communicating "the second request to the second supplier," as recited in

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Appellant's independent Claims 22, 33, and 45. The Examiner relies on the following against this limitation:

> As shown, seller 12 has a negotiation engine 16 that stores a current state 18 of negotiations. Negotiation engine 16 can comprise a software application executed by a computer system and implements the request-promise-acceptance framework described in detail below. Current state 18 can comprise data stored in a storage device that represents the current state of negotiations as well as associated data such as relevant items, quantities and dates. Seller 12 also can have scheduling-planning software 20 that provides planning functions including determining what goods can be promised, based on capacity.
>
> Buyer 14 can have a negotiation client 22 that communicates with negotiation engine 16 across a network communication layer. Negotiation client 22 can comprise a software application executed by a computer system and allows buyer 14 to query current state 18. Negotiation client 22 can be used to communicate requests and acceptances from buyer 14 to seller 12, and negotiation engine 16 can be used to communicate promises from seller 12 to buyer 14. The request, promise and acceptance information can also be communicated through other means such as by fax, phone, etc. According to the present invention, negotiation engine 16 provides a framework for maintaining current state 18 to reduce or eliminate any confusion about the status of the negotiation and relevant terms.

(*Kennedy*, Column 3, Line 60 – Column 4, Line 17) The passage, however, is silent regarding any second supplier. Accordingly, the proposed *Kennedy-Blanchard* combination does not disclose, teach, or suggest "communicating the second request to the second supplier," as recited in Appellant's independent Claims 22, 33, and 45.

For at least the above reasons, Claims 1, 11, 22, 33, and 44-47 are patentable over *Kennedy* in view of *Blanchard*. Accordingly, Appellant respectfully requests the Board to reverse the final rejection of Claims 1, 11, 22, 33, and 44-47 and to direct the Examiner to issue a Notice of Allowance with respect to 1, 11, 22, 33, and 44-47.

Dependent Claims

Appellant has demonstrated Claims 1, 11, 22, 33, and 44-47 to be allowable. Claims 2-10, 12-21, 23-32, and 34-43 depend on 1, 11, 22, and 33, respectively, and are also allowable for at least this reason. In addition, these dependent claims recite numerous additional patentable distinctions over the prior art of record.

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For example, the proposed *Kennedy-Blanchard* combination does not disclose, teach, or suggest "the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying the second supply as the culprit if the promise does not satisfy the request" (recited in Appellant's Claims 5 and 13) or "the second promise does not satisfy the second request, the promise identifying the second supply as the culprit" (recited in Appellant's Claims 6, 14, 24, and 35). As discussed above, the proposed *Kennedy-Blanchard* combination fails even to disclose, teach, or suggest identifying a culprit as a cause for a promise not satisfying a request. Accordingly, the *Kennedy-Blanchard* combination plainly does not disclose, teach, or suggest the limitations of Appellant's Claims 5, 6, 13, 14, 24, and 35.

Accordingly, Appellant respectfully requests the Board to reverse the final rejection of Claims 1-47 and to direct the Examiner to issue a Notice of Allowance with respect to Claims 1-47.

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Conclusion

Appellant has amply demonstrated that the present invention, as claimed, complies with all statutory requirements for a patent. Therefore, Appellant respectfully requests the Board to reverse the final rejection of the Examiner and to instruct the Examiner to issue a Notice of Allowance with respect to all claims.

Appellant has enclosed a copy of a Petition to Revive Unintentionally Abandoned Application Under 37 C.F.R. 1.137(b) which is being filed concurrently with the Office of Petitions.

Appellant has enclosed a check in the amount of $320.00 for this Appeal Brief. Appellant believes no additional fees are due. However, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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Appendix A

1.   A system for optimizing a request-promise workflow, the system comprising one or more software components associated with a second entity and embodied in computer-readable media and when executed operable to:

establish a demand at the second entity for one or more supplies supplied by a first entity operable to:

produce the supplies; and

optimize its production of the supplies using a request for the supplies as a constraint to generate a promise for the supplies;

optimize its production of the demand to generate a request for the supplies;

communicate the request to the first entity;

receive a promise for the supplies from the first entity based on the request, the promise having been generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

generate a constraint according to the culprit; and

reoptimize its production of the demand using the constraint generated according to the culprit to generate a new request if the promise does not satisfy the request.

2.   The system of Claim 1, wherein the first entity is operable to repeat the following until the promise satisfies the request:

receiving a request for the supplies from the second entity;

reoptimizing its production of the supplies using the request for the supplies as a constraint to generate a promise; and

communicating the promise to the second entity.

3.   The system of Claim 1, further operable to repeat the following until the promise satisfies the request:

optimizing its production of the demand to generate a request for the supplies;

communicating the request to the first entity;

receiving a promise for the supplies from the first entity based on the request, the promise having been generated according to an optimization of production of the supplies using the

request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

generating a constraint according to the culprit; and

reoptimizing its production of the demand using the constraint generated according to the culprit to generate a new request if the promise does not satisfy the request.

4.   The system of Claim 1, wherein:

the first entity is further operable to optimize its production of the supplies independently of the second entity; and

the second entity is further operable to optimize its production of the demand independently of the first entity.

5.   The system of Claim 1, wherein:

the request comprises a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying the second supply as the culprit if the promise does not satisfy the request.

6.   The system of Claim 5, wherein:

the second promise does not satisfy the second request, the promise identifying the second supply as the culprit; and

the second entity is further operable to optimize its production of the demand to generate a new request using the second promise for the second supply to generate the constraint.

7.   The system of Claim 1, wherein:

the request comprises a bundled request for at least two supplies to produce the demand;

the promise in response to the bundled request comprises a first promise, a second promise, and the culprit identifying the second promise as the cause for the promise not satisfying the bundled request; and

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the second entity is operable to reoptimize its production to generate a new request using the second promise to generate the constraint.

8.   The system of Claim 1, wherein:

the promise comprises an optimization objective and a promise constraint; and

the second entity is operable to reoptimize its production to generate a new request using the promise constraint and the optimization objective.

9.   The system of Claim 1, wherein the second entity is operable to generate a request in accordance with one or more internal resources.

10.   The system of Claim 1, wherein the second entity is operable to communicate a demand promise to a client if the promise satisfies the request.

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11.   A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

communicating the request to a supplier;

receiving a promise from the supplier, the promise having been generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand using the constraint generated according to the culprit to generate a new request for communication to the supplier.

12.   The method of Claim 11, further comprising repeating the following until the promise satisfies the request:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

communicating the request to the supplier;

receiving a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand in accordance with the constraint to generate a new request for communication to the supplier.

13.   The method of Claim 11, wherein:

the request comprises a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying the second supply as the culprit if the promise does not satisfy the request.

14.   The method of Claim 13, wherein:

the second promise does not satisfy the second request, the promise identifying the second supply as the culprit; and

reoptimizing the production of the demand to generate a new request further comprises using the second promise for the second supply to generate the constraint.

15.   The method of Claim 11, wherein:

the request comprises a bundled request comprising a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise, a second promise, and the culprit identifying the second promise as the cause for not satisfying the bundled request.

16.   The method of Claim 15, wherein reoptimizing the production of the demand to generate a new request further comprises using the second promise for the second supply to generate the constraint.

17.   The method of Claim 15, wherein the bundled request comprises the supplies required for one demand.

18.   The method of Claim 11, wherein:

the promise comprises an optimization objective and a promise constraint; and

reoptimizing the production of the demand to generate a new request further comprises reoptimizing using the promise constraint and the optimization objective.

19.   The method of Claim 11, wherein:

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optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand further comprises generating the request in accordance with one or more internal resources; and

reoptimizing the production of the demand to generate a new request further comprises generating the new request in accordance with the one or more internal resources.

20. The method of Claim 11, wherein determining whether the promise satisfies the request comprises determining whether the promise falls within an acceptable range.

21. The method of Claim 11, further comprising communicating a demand promise to a client if the promise satisfies the request.

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22. A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to a first supplier;

communicating the second request to a second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

23. The method of Claim 22, further comprising repeating the following until the first promise satisfies the first request and the second promise satisfies the second request:

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to the first supplier;

communicating the second request to the second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

24. The method of Claim 22, wherein:

the second promise does not satisfy the second request, the second promise identifying the second culprit; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the second promise to generate the constraint.

25. The method of Claim 22, wherein the request comprises a bundled request for one or more supplies required for one demand.

26. The method of Claim 25, wherein the request further comprises a sub-bundled request for the supplies supplied by the first supplier.

27. The method of Claim 26, further comprising:

receiving a first promise for the first supply from the first supplier, the first promise comprising the first culprit identifying a culprit promise that does not satisfy the sub-bundled request; and

reoptimizing the production of the demand to generate a new first request and a new second request using the culprit promise to generate the constraint.

28. The method of Claim 26, further comprising:

receiving a first promise for the first supply from the first supplier, the first promise comprising a first culprit promise that does not satisfy a first sub-bundled request;

receiving a second promise for the second supply from the second supplier, the second promise comprising a second culprit promise that does not satisfy a second sub-bundled request, the second sub-bundled promise being larger than the first sub-bundled promise;

reoptimizing the production of the demand to generate a new first request and a new second request using the first culprit promise to generate the constraint.

29.   The method of Claim 22, wherein:

the first promise comprises an optimization objective and a promise constraint; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises reoptimizing using the promise constraint and the optimization objective.

30.   The method of Claim 22, wherein:

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand further comprises generating the first request in accordance with one or more internal resources; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises generating the new first request and a new second request in accordance with the one or more internal resources.

31.   The method of Claim 22, wherein determining whether the first promise satisfies the first request comprises determining whether the first promise falls within an acceptable range.

32.   The method of Claim 22, further comprising communicating a demand promise to a client if the first promise satisfies the first request and the second promise satisfies the second request.

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33.   A system for optimizing a request-promise workflow, the system comprising one or more software components embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicate the first request to a first supplier;

communicate the second request to a second supplier;

receive a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receive a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determine whether the first promise satisfies the first request;

determine whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generate a constraint according to the first culprit or the second culprit, respectively, and reoptimize the production of the demand in accordance with the constraint to generate a new first request and a new second request.

34.   The system of Claim 33, operable to repeat the following until the first promise satisfies the first request and the second promise satisfies the second request:

optimizing production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to the first supplier;

communicating the second request to the second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

35. The system of Claim 33, wherein:

the second promise does not satisfy the second request, the second promise identifying the second culprit; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the second promise to generate the constraint.

36. The system of Claim 33, wherein the request comprises a bundled request for one or more supplies required for one demand.

37. The system of Claim 36, wherein the request further comprises a sub-bundled request for the supplies supplied by the first supplier.

38. The system of Claim 37, further operable to:

receive a first promise for the first supply from the first supplier, the first promise comprising the first culprit identifying a culprit promise that does not satisfy the sub-bundled request; and

reoptimize the production of the demand to generate a new first request and a new second request using the culprit promise to generate the constraint.

39. The system of Claim 37, further operable to:

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receive a first promise for the first supply from the first supplier, the first promise comprising a first culprit promise that does not satisfy a first sub-bundled request;

receive a second promise for the second supply from the second supplier, the second promise comprising a second culprit promise that does not satisfy a second sub-bundled request, the second sub-bundled promise being larger than the first sub-bundled promise;

reoptimize the production of the demand to generate a new first request and a new second request using the first culprit promise to generate the constraint.

40. The system of Claim 33, further operable to reoptimize production of the demand to generate a new first request and a new second request by reoptimizing using a promise constraint and an optimization objective, the first promise comprising the optimization objective and the promise constraint.

41. The system of Claim 33, further operable to:

optimize the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand by generating the first request in accordance with one or more internal resources; and

reoptimize the production of the demand to generate a new first request and a new second request by generating the new first request and a new second request in accordance with the one or more internal resources.

42. The system of Claim 33, further operable to determine whether the first promise satisfies the first request by determining whether the first promise falls within an acceptable range.

43. The system of Claim 33, further operable to communicate a demand promise to a client if the first promise satisfies the first request and the second promise satisfies the second request.

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44.   Software for optimizing a request-promise workflow, the software embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a request for the supplies needed to satisfy the demand;

communicate the request to a supplier;

receive a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determine whether the promise satisfies the request; and

if the promise does not satisfy the request, generate a constraint according to the culprit and reoptimize the production of the demand using the constraint generated according to the culprit to generate a new request for communication to the supplier.

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45.   Software for optimizing a request-promise workflow, the software embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicate the first request to a first supplier;

communicate the second request to a second supplier;

receive a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receive a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determine whether the first promise satisfies the first request;

determine whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generate a constraint according to the first culprit or the second culprit, respectively, and reoptimize the production of the demand in accordance with the constraint to generate a new first request and a new second request.

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46.   A system for optimizing a request-promise workflow, the method comprising:

means for establishing a demand associated with one or more supplies needed to satisfy the demand;

means for assuming that the supplies are unlimited;

means for optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

means for communicating the request to a supplier;

means for receiving a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

means for determining whether the promise satisfies the request; and

if the promise does not satisfy the request, means for generating a constraint according to the culprit and reoptimizing the production of the demand using the constraint generated according to the constraint to generate a new request for communication to the supplier.

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47.   A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

repeating the following until the promise satisfies the request:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand, the request comprising a first request for a first supply and a second request for a second supply;

communicating the request to a supplier;

receiving a promise from the supplier, the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying a culprit comprising the second supply as a cause for the promise not satisfying the request if the promise does not satisfy the request, the promise comprising an optimization objective and a promise constraint;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand in accordance with the constraint, the promise constraint, and the optimization objective to generate a new request for communication to the supplier.